freely rotatably about its center in a cage and protruding at both opposite sides in the form of a spherical cap from the cage.

11. Prosthesis in accordance with claim 10, wherein the cage is curved in its plane and symmetrical in relation to a transverse center plane.

12. Prosthesis in accordance with claim 11, wherein in cross section, the cage has the shape of an isosceles trapezoid, with the ends of the curved shape arranged at the narrow side thereof, the trapezoidal shape facilitating displacement in the plane of the intervertebral disc and preventing rotation of the prosthesis about its center axis.

13. Prosthesis in accordance with claim 10, wherein the cage comprises a casing made of a light, rigid, non-oxidizing, biocompatible material, and contains a mass made of a material with a minimum coefficient of friction, and wherein a space for accommodating the movable spherical body is provided in the interior of the mass, said spherical body being held trapped but freely rotatable therein.

14. Prosthesis in accordance with claim 13, wherein said casing comprises titanium.

15. Prosthesis in accordance with claim 14, wherein said mass comprises polyethylene.

16. Prosthesis in accordance with claim 13, wherein said mass comprises polyethylene.

17. Prosthesis in accordance with claim 10, wherein the cage has essentially the shape of an isosceles trapezoid and holds several identical balls which each touch on both sides of the horizontal center plane of the cage an identical imaginary plane lying outside the cage, and which are located on both sides of the cage at the corners of an isosceles triangle.

18. Prosthesis in accordance with claim 10, wherein the cage consists of two identical single components in the shape of an isosceles trapezoid, which are arranged such that their center planes extending at right angles to the parallel bases and along their center lines are essentially parallel to each other, and wherein the large bases of the trapezoidal single components lie essentially in a vertical plane, said single components being connected to each other by two elastic connecting elements which extend at right angles to the center planes of the single components and are located in the end area of the large axis forming a common tangent to the sets of balls which are each located on the outside of the arrangement at the corners of isosceles triangles, said triangles being oppositely orientated.

19. Prosthesis in accordance with claim 17, wherein the cage consisting of one single component or several single components with the balls has a volume which taking into consideration the function of the cage as holder for the balls is adapted as well as possible to the volume of the

biological nucleus, thereby to ensure a self-positioning of the prosthesis, which allows the prosthesis to always be in the anatomical position and the natural movements between two vertebral bodies to be restored.

20. Prosthesis in accordance with claim 10, wherein the height of the spherical cap protruding from the cage is approximately a tenth of the diameter of the movable body.

21. A method for implanting an intervertebral nucleus prosthesis consisting of at least one spherical body movable in two directions of a plane and made of a rigid, non-oxidizing, biocompatible material, with a diameter adapted to a biological nucleus, said spherical body being mounted non-displaceably but freely rotatably about its center in a cage and protruding at both opposite sides in the form of a spherical cap from the cage, comprising the steps of:

for insertion of the prosthesis consisting of the cage and balls, making an incision endoscopically in the annulus between two vertebral bodies, thereby providing an opening which is just large enough to reach and remove the damaged nucleus and immediately insert in the same way the artificial nucleus which automatically centers itself in the cavity thus formed, and

subsequently closing said opening.

22. The method of claim 21, wherein said opening is closed by a suture. --